

West Nile Virus in Humans

Administering Department: Virology

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Purpose of Test:

To detect IgM and/or IgG antibodies to West Nile virus in human serum, and IgM antibody in cerebrospinal fluid. The tests are indicated for testing persons having symptoms of meningoencephalitis, as an aid in the presumptive laboratory diagnosis of West Nile virus infection.

Method: IgM Capture Enzyme-linked Immunoassay; IgG Enzyme-linked Immunoassay.

Sample and Submission Guidelines:

1 ml serum or spinal fluid; keep cool at 2 to 8° C it tested within 48 hours, otherwise freeze at -20° C or colder.

Properly labeled specimen must be accompanied with the Virus and Miscellaneous Serological Tests form. Indicate on-set date, travel history, and prior vaccination for flaviviruses (Yellow-fever, dengue, Japanese encephalitis)

Specimens drawn within 8 days of on-set and test negative will require submission of convalescent specimen.

Possible Results and Meaning:

IgM Positive: Presumptive evidence of recent or current infection with West Nile virus

IgM Negative and IgG Positive: Presumptive evidence of infection with West Nile virus in the past.

IgM and IgG Negative: No significant level of antibody detected, If specimen drawn <8 days post on-set, submit convalescent specimen.

IgM antibody is detectable in serum by eighth day post onset of symptoms, and will remain detectable for at least 1-2 months; and in some cases for 500 days or longer.

IgG antibody is detectable in serum by three weeks post-infection and will remain positive for 500 days or longer.

NOTE: PCR is not a recommended test for detection of infection in humans. Viral load drops before on-set of symptoms greatly decreasing the chances of detecting viral nucleic acid.

Charge for test: No charge

Turn-Around-Time: 1 to 3 days (M-F)

Links: CDC West Nile Virus Web Site <http://www.cdc.gov/ncidod/dvbid/westnile>